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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/878,104	06/08/2001	Kevin W. Kobayashi	12-1101	2370

7590 08/28/2003

Patent Counsel
TRW Inc.
S&E Law Department, E2/6051
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EXAMINER

NGUYEN, KHAI M

ART UNIT	PAPER NUMBER
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2819

DATE MAILED: 08/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/878,104

Applicant(s)

KOBAYASHI, KEVIN W.

Examiner

Khai M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8, 9 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 5, 10-11, and 15-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The application has not been checked to the extent necessary to determine the presence of all possible typographical and grammatical errors. However, Applicant's cooperation is requested in correcting any errors of which he/she may become aware in the application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-6, 8, 10, 13, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6, lines 5 & 6: "said power amplifier" lacks antecedent basis (it should read as said Doherty power amplifier). Correction is required.

Claims 8 & 10, line 2: "said/the power amplifier" lacks antecedent basis.
Correction is required.

Regarding claim 13, line 2, "said predistortion circuit" lacks antecedent basis (it should read as said upstream predistortion circuit). Correction is required.

Claim 15, line 2: "power amplifier" lacks antecedent basis – it is unclear.
Correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6, 8-9, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Long (US 5,886,575).

Regarding claim 1, Long discloses a power amplifier comprising: a first Doherty power amplifier (404 or 408), including a peak and carrier amplifier, having predetermined characteristics (gain G1 and/or G2, bias level/supply voltages) connected/coupled in series with a second Doherty amplifier (408 or 404), wherein the bias/gain/supply voltage of the Doherty amplifiers are adjusted/selected by tuning means (232 and 228) (see Figure 6; and column 6, lines 1-9, and 27-38).

Regarding claim 2, Long discloses (Fig. 6) that one of the predictortion characteristics is gain (G1 & G2) as a function of input power level.

Regarding claim 3, Long discloses the bias levels are selected/adjusted to provide gain/expansion as a function of input power (column 6, lines 1-9, and 27-38).

Regarding claim 4, Long discloses an RF input signal has a predetermined phase characteristic (Fig. 6).

Regarding claim 6, Long discloses an amplifier comprising: a first Doherty power amplifier (404 or 408) having predetermined characteristics (gain, bias level/supply

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voltages) including input power range as a function of RF input power (250); and a second Doherty amplifier (408 or 404) serially connected/coupled to the first Doherty amplifier having characteristics selected (gain, bias levels/supply voltages) to precompensate for the predetermined characteristics of the first Doherty power amplifier as a function of input power (see Figure 6 and column 6, lines 1-9, and 27-38).

Regarding claim 8, Long discloses the Doherty amplifiers having a predetermined gain as a function of input power (Fig. 6).

Regarding claim 9, Long discloses the upstream predistortion circuit (404) is configured to have a gain/expansion (G2).

Regarding claims 12 & 13, Long discloses an amplifier comprising: a first Doherty power amplifier (404 or 408) having predetermined characteristics (gain, bias level/supply voltages) including input power range as a function of RF input power (250); a second Doherty amplifier (408 or 404) serially connected/coupled to the first Doherty amplifier having characteristics selected (gain, bias levels/supply voltages) to precompensate for the predetermined characteristics of the first Doherty power amplifier; and a circuit (232) for tuning the first/second Doherty amplifiers (see Figure 6 and column 6, lines 1-9, and 27-38).

Regarding claim 14, Long discloses the predetermined characteristic of claim 12 is the output gain (G1 & G2) and the tuning means enables the output gain(s) to be adjusted (Fig. 6; and column 6, lines 29-38).

Allowable Subject Matter

6. Claims 5, 10-11, and 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see the attached PTO-892).

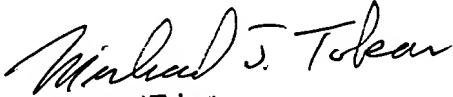
Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 703-605-4244. The examiner can normally be reached on 8:30 to 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J Tokar can be reached on 703-305-3493. The fax phone numbers for the organization where this application or proceeding is assigned are 703- 872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-6789.

KN
August 12, 2003


Michael Tokar
Supervisory Patent Examiner
Technology Center 2800